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EXAMINER

KIBLER, VIRGINIA M

ART UNIT

PAPER NUMBER

2623

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/730,573

Applicant(s)

KOWALD, JULIE RAE

Examiner

Virginia M Kibler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 March 2004 and 29 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-87 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-87 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendments received on 3/11/04 and 4/29/04 have been entered. Claims 1-87 remain pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 3, 4, 6, 7, 11-17, 24-26, 29-33, 37, 39, 41-45, 51-55, 59, 63-68, and 83-87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potts et al. (6,593,956) in view of Sethi et al. ("A Statistical Approach to Scene Change Detection") and in further view of Murphy ("Digital Document Metadata in Organizations: Roles, Analytical Approaches, and Future Research Directions").

Regarding claims 1 and 84, Potts et al. ("Potts") analyzing a digital image for the presence of a human face (Col. 7, lines 59-61), determining a size of the located face with respect to a size of the image (Col. 10, lines 7-34), and classifying the image based on the relative size of the face with respect to the image (Col. 10, lines 35-52). Potts discloses classifying the image based on the relative size of the face with respect to the image, but does not recognize classifying according to one of a number of shot types. However,

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Sethi et al. ("Sethi") discloses using the relative size of the face with respect to the image to determine the shot type classification (Page 4, para. 3). Potts and Sethi are combinable because they are from the same field of endeavor of video processing. At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified the classification based on the relative size of the face with respect to the image disclosed by Potts to include classification according to shot type. The motivation for doing so would have been because attributes of a shot provide a statistical characterization of a video and such a characterization is useful to differentiate between the styles of moviemakers (Sect. 1, para. 1). Therefore, it would have been obvious to combine Potts with Sethi to obtain the classification specified in claims 1 and 84. Potts and Sethi do not appear to recognize storing the classification of the digital image as metadata associated with the digital image. However, this is well known and routinely utilized in the art. For example, Murphy discloses associate metadata with digital images for organization, or classification (pages 267-269). Potts, Sethi, and Murphy are combinable because they are from similar problem solving area of classification. At the time of the invention, it would have been obvious to one of ordinary skill in the art to have modified the classification disclosed by Potts and Sethi to include storing the classification as metadata. The motivation for doing so would have been because metadata facilitates file manipulation and provides unique identifying information about digital images. Therefore, it would have been obvious to combine Potts and Sethi with Murphy to obtain the invention as specified in claims 1 and 84.

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Regarding claims 16, 45, and 86, the arguments analogous to those presented above for claim 1 are applicable to claims 16, 45, and 86. Potts discloses determining a position of the located face with respect to a frame of the image (Col. 8, lines 61-64).

Regarding claims 37 and 59, the arguments analogous to those presented above for claim 1 are applicable to claims 37 and 59.

Regarding claims 2 and 17, Potts discloses classifying the image based on the relative size of the face with respect to the image (Col. 10, lines 35-52). Potts does not recognize classifying using a term which provides information about an intention of a photographer whom captured the image. However, Sethi et al. ("Sethi") teaches that it is known to use the relative size of the face with respect to the image to determine the shot type (Page 4, para. 3) which provides information about an intention of a photographer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the classification disclosed by Potts to include classifying using shot type as taught by Sethi because attributes of a shot provide a statistical characterization of a video and such a characterization is useful to differentiate between the styles of moviemakers (Sect. 1, para. 1).

Regarding claims 3/1 and 3/2, Sethi discloses classifying an image as a long-shot, or a far-shot (Page 4, para. 3).

Regarding claims 4/1 and 4/2, Sethi discloses classifying an image as a close-up (Page 4, para. 3).

Regarding claims 6/1 and 6/2, Potts discloses classifying including associating a size of the located face with a set of predetermined thresholds for a size of a human face image (Col. 10, lines 35-52).

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Regarding claims 7/1 and 7/2, Sethi discloses classifying an image as a far shot (Page 4, para. 3). Sethi discloses the gradations of distances between the camera and the recorded scene do not imply a fixed measurable distance in each case but are rather defined with respect to the subject being recorded (Page 4, para 3). While Sethi does not explicitly state a predetermined threshold, it would have been obvious to one of ordinary skill in the art at the time of the invention to specify a threshold as a design choice.

Regarding claim 11, Potts discloses analyzing including interpreting information provided with the image (Col. 8, lines 60-67, Col. 9, lines 1-2).

Regarding claim 12, Potts discloses the image including a frame of a digital video sequence of images (Col. 7, lines 59-61).

Regarding claim 13, Potts discloses the information is associated with other frames of the sequence (Col. 8, lines 60-67, Col. 9, lines 1-2).

Regarding claim 14, Potts discloses analyzing including detecting one or more regions of the image at which skin colored pixels are located in order to locate the face (Col. 8, lines 60-67, Col. 9, lines 1-2).

Regarding claim 15, Potts discloses approximating the size of the located face by a height and width of a bounding rectangle that encloses the face (Col. 10, lines 7-34).

Regarding claims 24-26, the arguments analogous to those presented above for claims 11-13 are applicable to claims 24-26, respectively.

Regarding claim 29, Potts discloses analyzing the image for the presence of a predetermined non-human component (Col. 10, lines 53-62), assessing the predetermined component with respect to at least one further criteria and where the criteria is met,

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classifying the image based upon the presence of the predetermined component (Col. 10, lines 63-67, Col. 11, lines 1-40).

Regarding claim 30, Potts discloses the predetermined component including a color of a distinct region of the image (Col. 10, lines 53-62).

Regarding claim 31, Potts discloses the criteria including relative motion of the predetermined component within the image (Col. 11, lines 1-13).

Regarding claims 32 and 54, the arguments analogous to those presented for claims 1 and 2 are applicable to claims 32 and 54. Sethi discloses editing the sequence using the classification to form an output of sequence of images (Page 4, para. 4).

Regarding claims 33 and 55, Sethi discloses an edit function of segmenting the video sequence into a number of clips whereas those images that do not satisfy the edit function are omitted from the sequence (Abstract).

Regarding claims 39 and 41-44, the arguments analogous to those presented above for claims 6/1, 11, 12, 14, and 15, respectively.

Regarding claims 51-53, the arguments analogous to those presented above for claims 29-31 are applicable to claims 51-53, respectively.

Regarding claims 63-68, the arguments analogous to those presented above for claims 11-15 and 45 are applicable to claims 63-68, respectively.

Regarding claims 83/1, 83/16, 83/37, 83/45, and 83/59, the arguments analogous to those presented for claims 1 and 2 are applicable to claims 83/1, 83/16, 83/37, 83/45, and 83/59. Sethi discloses an edited sequence of images formed through implementation of a series of images (page 4, para. 4).

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Regarding claims 85 and 87, Sethi discloses classifying the shot type based on the relative distance between the camera and the recorded scene (Page 4, para. 3). It would have been obvious to specify a motor vehicle or building.

4. Claims 34-36 and 56-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potts et al. (6,593,956), Sethi et al. ("A Statistical Approach to Scene Change Detection"), and Murphy ("Digital Document Metadata in Organizations: Roles, Analytical Approaches, and Future Research Directions") as applied to claims 32 and 55 above, and further in view of Morag (6,324,545).

Regarding claim 34, Sethi discloses editing the sequence but does not appear to recognize using an editing template. However, Morag teaches that it is known to classify images by type and using a template (Col. 8, lines 3-8). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the classification and editing disclosed by Potts, Sethi, and Murphy to include using a template as taught by Morag because it is well known in the art and is an alternative way to classify the images.

Regarding claims 35-36, the arguments analogous to those presented above for claim 34 are applicable to claims 35-36. Morag discloses an effect consisting of visual effects including blurring (Col. 8, lines 26-46).

Regarding claims 56-58, the arguments analogous to those presented above for claims 34-36 are applicable to claims 56-58.

5. Claims 5/1, 5/2, 8/1, 8/2, 9/1, 9/2, 10/1, 10/2, 18/16, 18/17, 19/16, 19/17, 20/16, 20/17, 21/16, 21/17, 22/16, 22/17, 23/16, 23/17, 27, 28, 38, 40, 46-49, 50, 60-62, and 69-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potts et al.

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(6,593,956), Sethi et al. ("A Statistical Approach to Scene Change Detection"), and Murphy ("Digital Document Metadata in Organizations: Roles, Analytical Approaches, and Future Research Directions") as applied to claims 1, 2, 7, 16, 17, 39, 45, 59 and 68 above, and further in view of Chandler (*The 'Grammar' of Television and Film*).

Regarding claims 5/1 and 5/2, the arguments analogous to those presented above for claim 2 are applicable to claims 5/1 and 5/2. Sethi does not appear to recognize further classifying an image as an extreme close-up. However, Chandler teaches that it is known to classify an image as a big close-up, or an extreme close-up (Page 1 and 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the classification disclosed by Potts, Sethi, and Murphy to include extreme close-up as taught by Chandler because it is another type of shot used to emphasize a subject's feelings or reactions.

Regarding claims 8/1 and 8/2, the arguments analogous to those presented above for claims 5/1 and 7 are applicable to claims 8/1 and 8/2.

Regarding claims 9/1 and 9/2, the arguments analogous to those presented above for claims 4/1 and 7/1 are applicable to claims 9/1 and 9/2.

Regarding claims 10/1 and 10/2, Sethi discloses classifying an image as a medium shot (Page 4, para. 3). The arguments analogous to those presented above for claim 7/1 are applicable to claims 10/1 and 10/2.

Regarding claims 18/16, 18/17, 19/16, 19/17, 20/16, 20/17, 21/16, 21/17, 22/16, 22/17, 23/16, and 23/17, the arguments analogous to those presented above for claim 2 are applicable to claims 18/16, 18/17, 19/16, 19/17, 20/16, 20/17, 21/16, 21/17, 22/16, 22/17, 23/16, and 23/17. Sethi does not recognize classifying an image as a high-shot,

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eye-level shot, low shot, left shot, or right shot. However, Chandler teaches that it is known to classify an image according the direction and height from which the camera takes the scene (Page 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the classification disclosed by Potts, Sethi, and Murphy to include classifying images as high-shot, eye-level, low, left, or right shot as taught by Chandler because it provides further classification of the images based on the intentions of the photographer.

Regarding claim 38, the arguments analogous to those presented above for claims 3, 4, 7, and 8 are applicable to claim 38.

Regarding claim 40, the arguments analogous to those presented above for claims 38 and 10 are applicable to claim 40

Regarding claim 46, the arguments analogous to those presented above for claims 18/1 – 23/1 are applicable to claim 46.

Regarding claims 47-49, the arguments analogous to those presented above for claims 11-13 are applicable to claims 47-49, respectively.

Regarding claims 60-62, the arguments analogous to those presented above for claims 38-40 are applicable to claims 60-62, respectively.

Regarding claims 69-72, the arguments analogous to those presented above for claims 46-49 are applicable to claims 69-72, respectively.

Regarding claims 75-79, the arguments analogous to those presented above for claims 29-33 are applicable to claims 75-79, respectively.

Regarding claims 27-28, 50, and 73-74, Chandler discloses that it is known to use the angle of shot as a classification. Chandler does not specify classifying an image as a

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Dutch shot with a predetermined angle of inclination. However, this is a well-known term in film grammar. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the classification disclosed by Chandler to include classifying an image as Dutch shot with a predetermined angle of inclination because it is well-known in the art and provides further classification of the image.

6. Claims 80-82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potts et al. (6,593,956), Sethi et al. ("A Statistical Approach to Scene Change Detection"), Murphy ("Digital Document Metadata in Organizations: Roles, Analytical Approaches, and Future Research Directions") and Chandler (*The 'Grammar' of Television and Film*) as applied to claim 79 above, and further in view Morag (6,324,545).

Regarding claims 80-82, the arguments analogous to those presented above for claims 34-36 are applicable to claims 80-82, respectively.

Response to Arguments

7. Applicant's arguments filed 3/11/04 have been fully considered but they are not persuasive.

Summary of Applicant's Argument: Potts does not teach or suggest classification based on shot type. Sethi fails to provide any link between shot type and the intentions of the photographer. Sethi refers to shot type as one test for scene change detection and not

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for any purpose of classification of an image. Sethi is silent as to any mechanism of classification of shot type.

Examiner's Response: Potts discloses classifying the image based on the relative size of the face with respect to the image (Col. 10, lines 35-52). Potts is not relied on for teaching classification based on shot type. Sethi discloses shot type classification depending upon the distance between the camera and the subject being recorded (Page 4, para. 3). Sethi discloses determining the shot type of an image including close up, close shot, medium shot, full shot, and long shot (Page 4, para. 3), thereby providing information about an intention of a photographer. For example, a close-up is used to focus attention on a person's feelings or reactions. Sethi further discloses a statistical characterization of a video is also possible in terms of different attributes of a shot including shot type where such a characterization is useful to differentiate between the styles of different moviemakers and can provide a way of clustering video (Page 1, para. 2). Potts discloses a mechanism of classification of images based on relative distance. Sethi teaches that it is known to classify the relative distance according to shot types. The combined teachings of Potts and Sethi meet the claimed limitation of classifying a digital image according to one of a number of shot types based on the relative size of the face with respect to the image.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia M Kibler whose telephone number is (703) 306-4072. The examiner can normally be reached on Mon-Thurs 8:00 - 5:30 and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on (703) 308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Virginia Kibler
07/07/04

MEHRDAD DASTOURI
PRIMARY EXAMINER
